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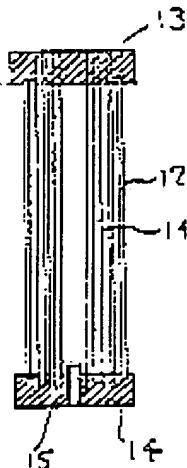
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(54) HOLLOW YARN TYPE SEPARATION MEMBRANE ELEMENT

(57)Abstract:

PURPOSE: To efficiently remove the suspended substance adhered to the surface of a membrane, by protecting the outermost periphery of a hollow yarn bundle by a reticulated or porous protector of which the void ratio is a predetermined value or more and providing a through-hole or nozzle, of which the diameter is a specific value or more, to the adhesion part of the end part of the hollow yarn bundle.

CONSTITUTION: Both end parts of a hollow yarn bundle 11 is adhered and fixed by an adhesive and both ends of the hollow yarn bundle are opened. The outermost periphery of the hollow yarn bundle 11 is protected by a reticulated or porous protector made of polyethylene of which the void ratio is 5% or more and a nozzle 15 is provided to the adhesion part of one end of the hollow yarn bundle 11 so as to pierce therethrough. A liquid to be treated is supplied to a filter wherein this hollow yarn type separation element is received in an outer cylinder and each hollow yarn is pressurized from the outer surface side thereof to perform ultrafiltration or precise filtration obtaining permeated water from the inner surface side of the hollow yarn. When the suspended substance adhered to the surface of the membrane is removed, air from an air blow nozzle is penetrated in the separation membrane element from the nozzle 15 of the adhesion part 14 and the suspended substance on the surface of the hollow yarn is scraped off by bubble action. Thereafter, treated water is discharged out of the system along with the suspended substance.



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